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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711.224	09/02/2004	Paul A. Hyde	BUR920030186US1	5223

44152 7590 05/07/2007  
GREENBLUM & BERNSTEIN, P.L.C.  
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RESTON, VA 20191

EXAMINER
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CHARIOUI, MOHAMED

ART UNIT	PAPER NUMBER
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2857

NOTIFICATION DATE	DELIVERY MODE
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05/07/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

**Office Action Summary**

Application No.

10/711,224

Applicant(s)

HYDE ET AL.

Examiner

Mohamed Charioui

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 and 37-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-35, 37-46 and 54-57 is/are allowed.
- 6) ☒ Claim(s) 47-53, 58 and 59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1. Applicant cancelled claim 36.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 53 and 59** are rejected under 35 USC § 101 because they are directed to non-statutory subject matter.

The descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts." Being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 47-52 and 58** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: how is the temperature of an active region of the semiconductor is being determined?

***Allowable Subject Matter***

4. **Claims 1-35, 37-46 and 54-57** are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

**Regarding claims 1-24 and 54**, none of the prior art of record teaches or suggests measuring a change in at least one electrical characteristic of the first sensing device caused by the heat generated at the first heating device and calculating a temperature of the first heating device using the measured change in the at least one electrical characteristic, in combination with the rest of the claim limitations.

**Regarding claims 25-33 and 55**, none of the prior art of record teaches or suggests incrementally measuring a change in the at least one electrical characteristic of the measurement transistor caused by the heat generated at the heating transistor and calculating the temperature of the heating transistor using the measured change in the at least one electrical characteristic, in combination with the rest of the claim limitations.

**Regarding claims 34, 35, 37, 38 and 56**, none of the prior art of record teaches or suggests a common source contact being arranged on the silicon island and leading

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to the source of both the transistor configured to generate heat and the transistor configured to sense temperature, in combination with the rest of the claim limitations.

**Regarding claims 39-46 and 57**, none of the prior art of record teaches or suggests at least one sensing field effect transistor arranged within the at least one silicon island corresponding to each heating field effect transistor of the at least one heating field effect transistor, wherein each sensing field effect transistor is arranged a prescribed distance from its corresponding heating field effect transistor and each sensing field effect transistor is configurable to sense a temperature; and means to calculate a temperature of the each heating field effect transistor using a measured change in at least one electrical characteristic of the each sensing field effect transistor caused by the heat generated at the each heating field effect transistor, in combination with the rest of the claim limitations.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-35 and 37-59 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Contact information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

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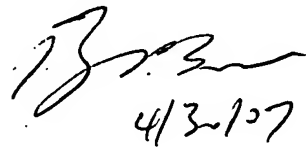
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

4/23/07

BRYAN BUI  
PRIMARY EXAMINER



4/30/07